Gulf of Mexico Harmful Algal Bloom Bulletin

22 November 2004

National Ocean Service

National Environmental Satellite, Data, and Information Service

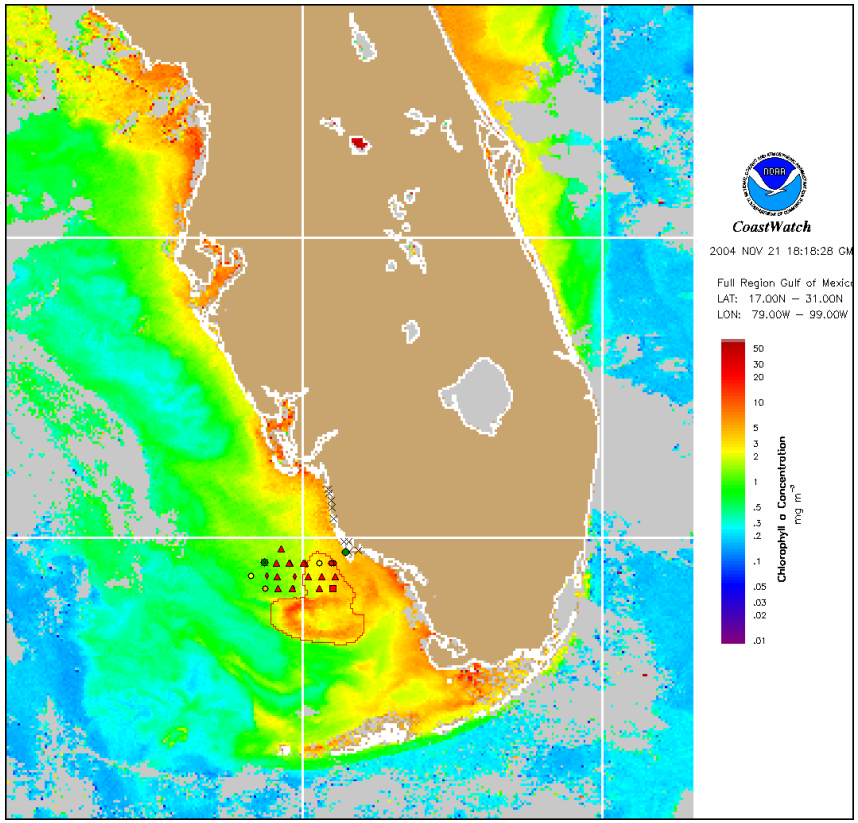
Last bulletin: November 19, 2004

Conditions: A harmful algal bloom has been identified off the coast of Cape Romano. Discolored water is possible southwest of Cape Romano. Beach impacts are possible through Wednesday.

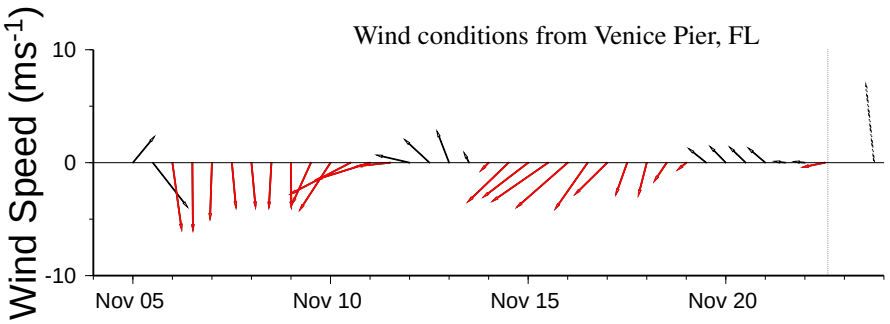
Analysis: Southeasterly winds through the weekend have slowed the southern transport of the harmful algal bloom offshore of Cape Romano. The bloom center is currently located at approximately 25°27'N 81°51'W with chlorophyll concentrations still above 10μg/L on the western edge of the bloom. The bloom has expanded, primarily along its east-west axis, stretching from about 81°31'W to approximately 82°9'W. Offshore cruise samples conducted November 8-11 indicated medium to high levels of Karenia brevis in this bloom, but no further offshore samples are available. Onshore samples reveal no Karenia from Vanderbilt Beach to Naples. As of November 19, Karenia was still present onshore at South Marco Beach. The bloom may continue to move slightly south throughout the week and is likely to move further onshore, with possible beach impacts, through Wednesday due to the southerly to southwesterly winds. The nonharmful Rhizosolenia bloom about 10 miles north of the lower keys is beginning to dissipate although chlorophyll concentrations are still above 5μg/L offshore of Cape Sable.

*Offshore samples indicated in chlorophyll image were collected during November 11 from a MERHAB cruise.

-Stolz, Fenstermacher

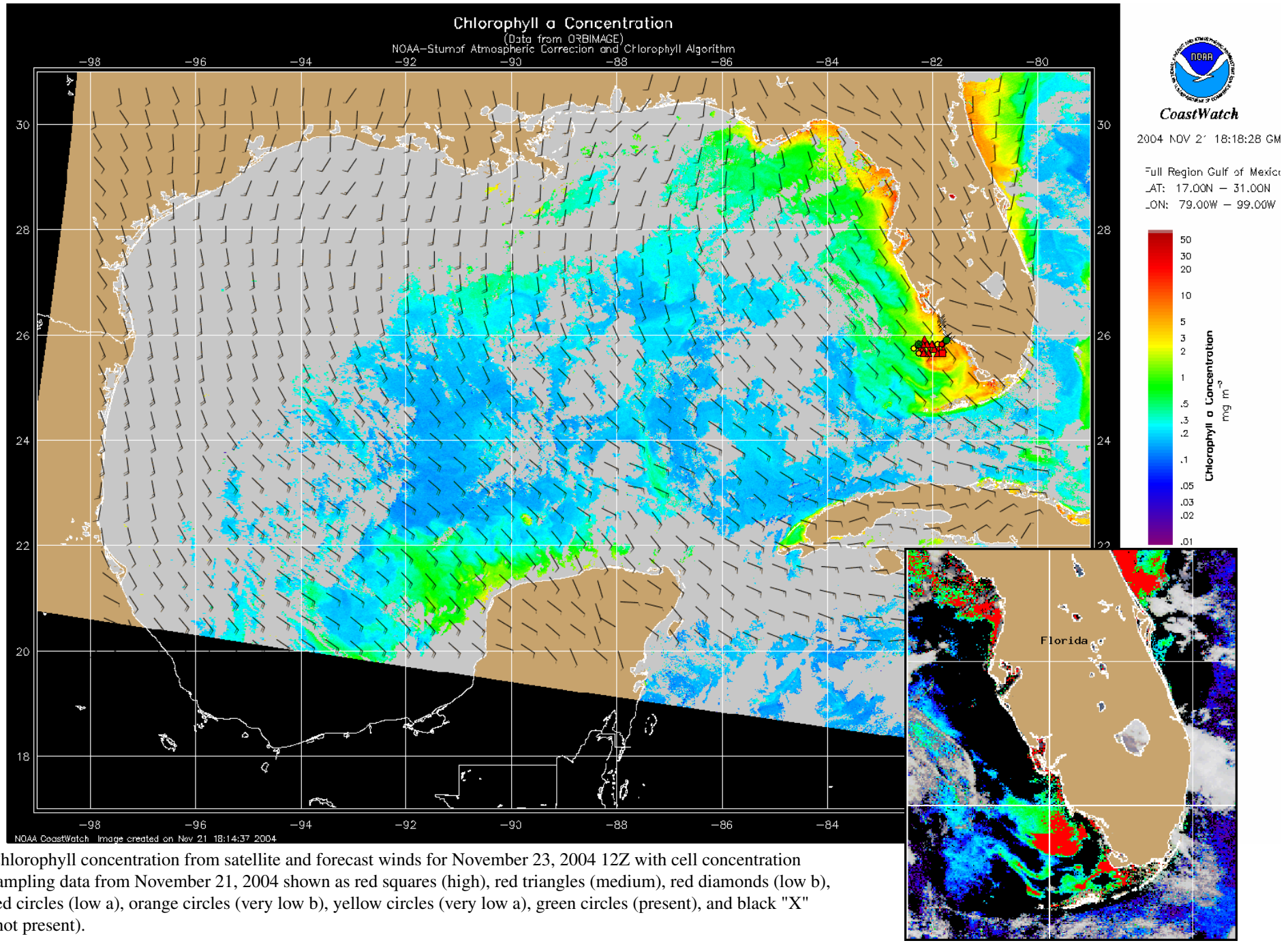


Chlorophyll concentration from satellite with possible HAB areas shown by red polygon(s). Cell concentration sampling data from November 21, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).



Wind speed and direction are averaged over 12 hours from measurements made on buoys. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts.

Steady 10-15 knot (5-7 m/s) southerlies, shifting to the southwest in the afternoons, through Wednesday night. Northwesterly winds are forecasted on Thursday and northeasterlies on Friday.



Chlorophyll concentration from satellite and forecast winds for November 23, 2004 12Z with cell concentration sampling data from November 21, 2004 shown as red squares (high), red triangles (medium), red diamonds (low b), red circles (low a), orange circles (very low b), yellow circles (very low a), green circles (present), and black "X" (not present).

Blooms shown in red (see p. 1 analysis and image for interpretation)